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TITLE: Pyrometer for solar radiation measurement - uses two concentric hemispherical filters separated by vacuum space and with outer filter cooled by air supplied from motor driven fan

INVENTOR: GUICHERD, R

PATENT-ASSIGNEE: COMMISSARIAT ENERGIE ATOMIQUE[COMS]

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PATENT-FAMILY:

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ABSTRACTED-PUB-NO: FR 2445955A

BASIC-ABSTRACT: The pyranometer used to measure solar radiation contains filters surrounding the detector. Connection affects the filters to disturb the measurement precision and is overcome by surrounding the detector by a vacuum. The pyranometer comprises a hemispherical selective filter (20) sealed onto a circular base (12) to form a space (22) in which a detector (16) is mounted in a vacuum. A second similar selective filter (24) is sealed to an annular support (14) to form a sealed space (28) between the filters in which a vacuum exists.

Cooling air is directed onto the outer filter by nozzles (36) supplied from a motor (32) driven fan (30) via passages (38) in the base. This cooling action together with the vacuum conditions between filters and detectors eliminates connection heating of the filters.

TITLE-TERMS:

PYROMETER SOLAR RADIATE MEASURE TWO CONCENTRIC
HEMISPHERICAL FILTER SEPARATE
VACUUM SPACE OUTER FILTER COOLING AIR SUPPLY MOTOR DRIVE
FAN

DERWENT-CLASS: Q74 S03

EPI-CODES: S03-A03; S03-C09;